FIG. 1

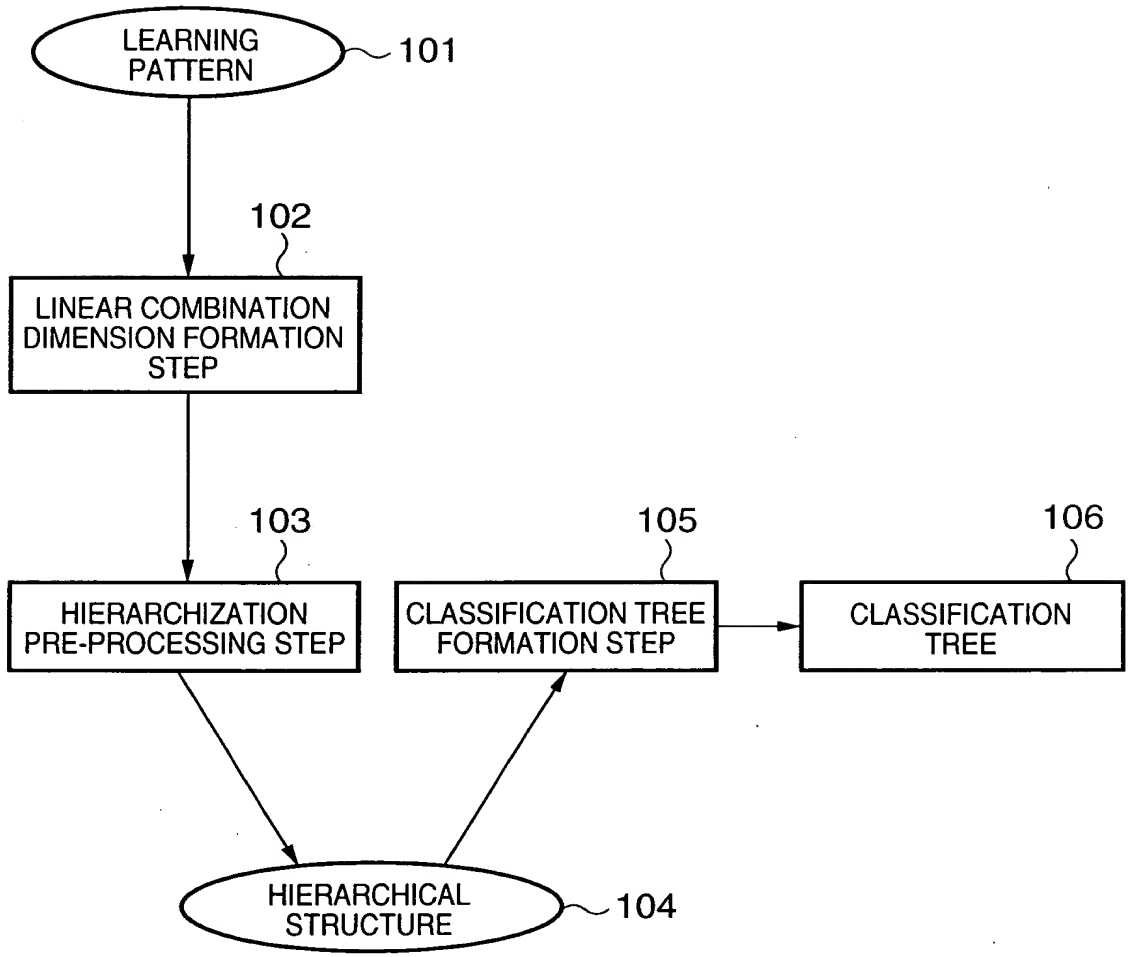

LEARNING PATTERN
101
102
LINEAR COMBINATION DIMENSION FORMATION STEP
103
HIERARCHIZATION PRE-PROCESSING STEP
105
CLASSIFICATION TREE FORMATION STEP
106
CLASSIFICATION TREE
HIERARCHICAL STRUCTURE
104

FIG. 2

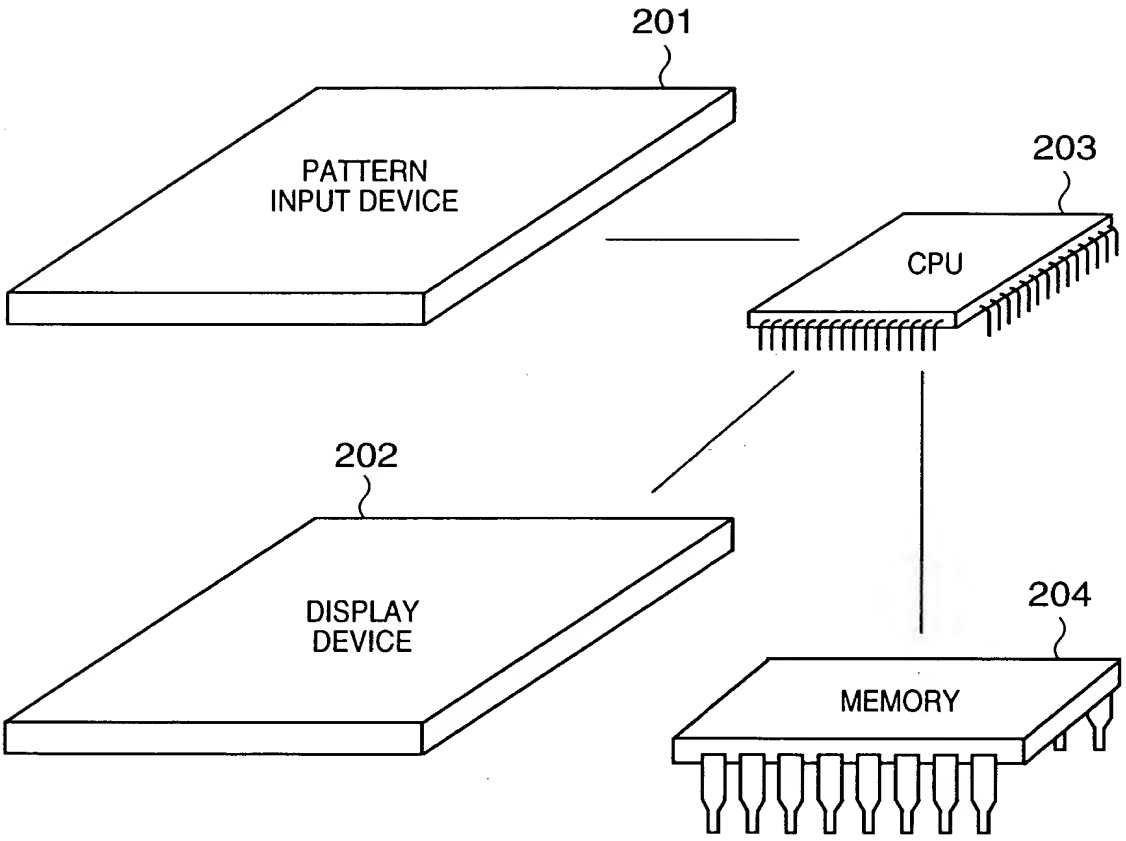

201
PATTERN
INPUT DEVICE
203
CPU
202
DISPLAY
DEVICE
204
MEMORY

FIG. 3

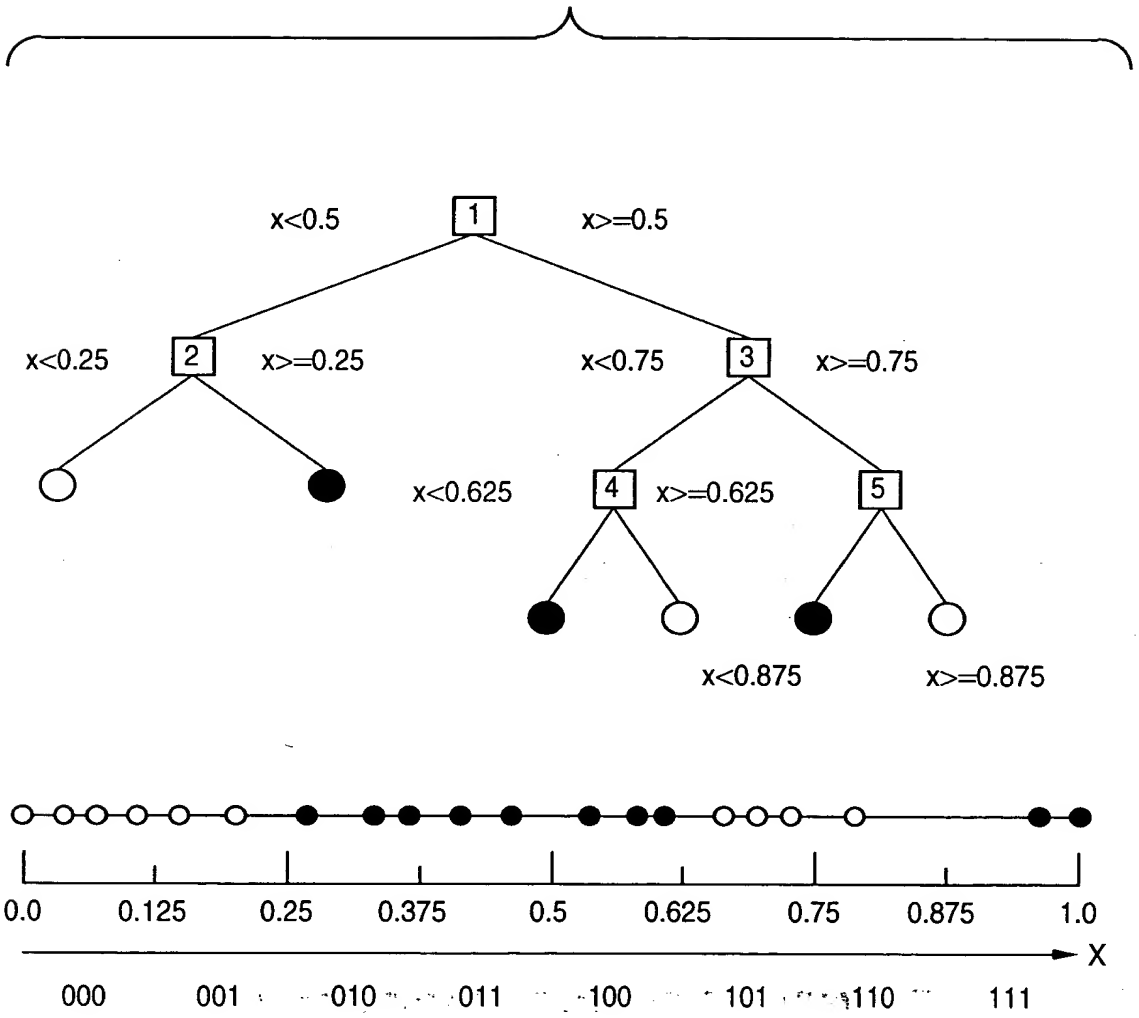

x<0.5
1
x>=0.5
x<0.25
2
x>=0.25
x<0.75
3
x>=0.75
x<0.625
4
x>=0.625
5
x<0.875
x>=0.875
0.0
0.125
0.25
0.375
0.5
0.625
0.75
0.875
1.0
X
000
001
010
011
100
101
110
111

FIG. 4

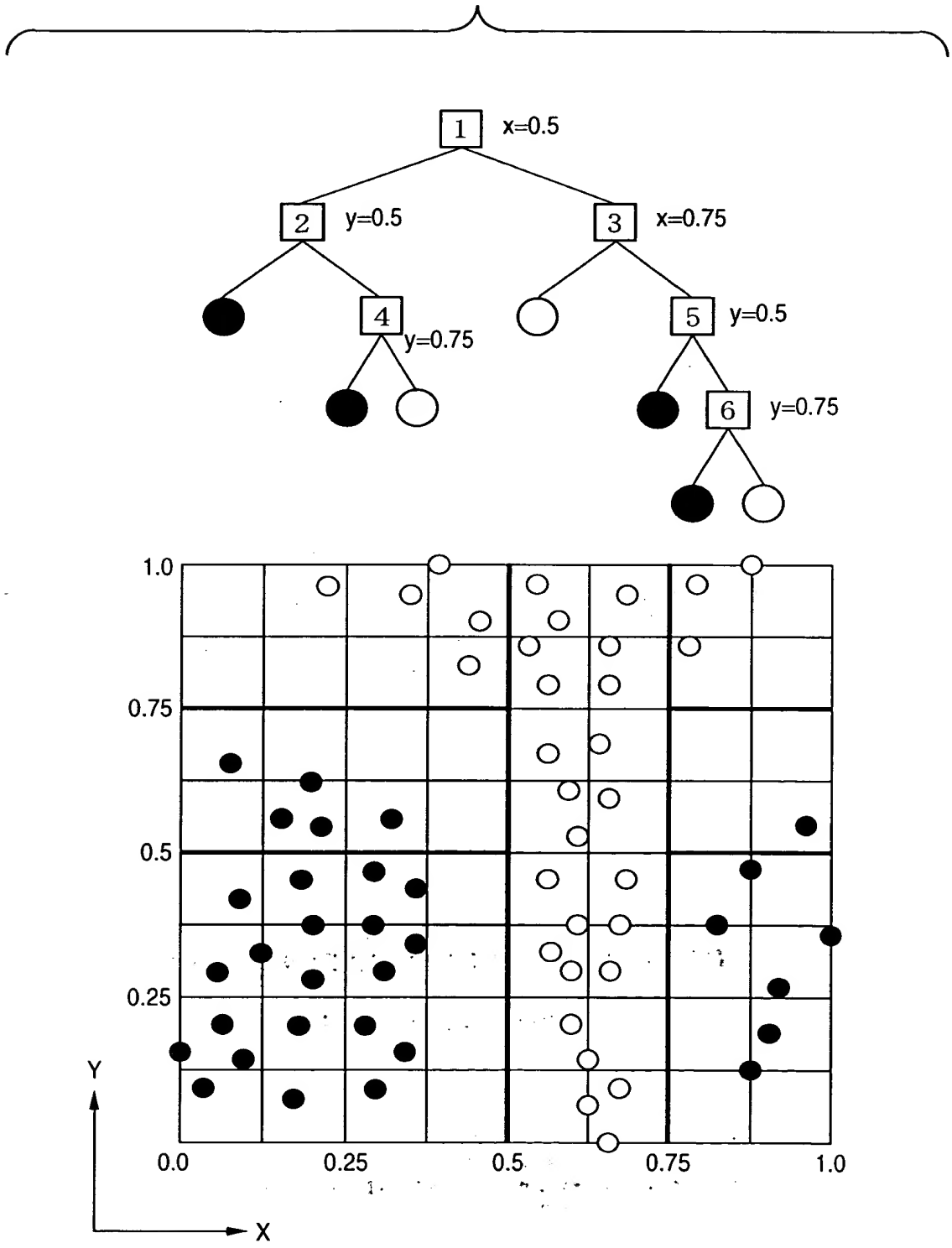

1
x=0.5
2
y=0.5
3
x=0.75
4
y=0.75
5
y=0.5
6
y=0.75
1.0
0.75
0.5
0.25
0.0
0.25
0.5
0.75
1.0
Y
X

FIG. 5

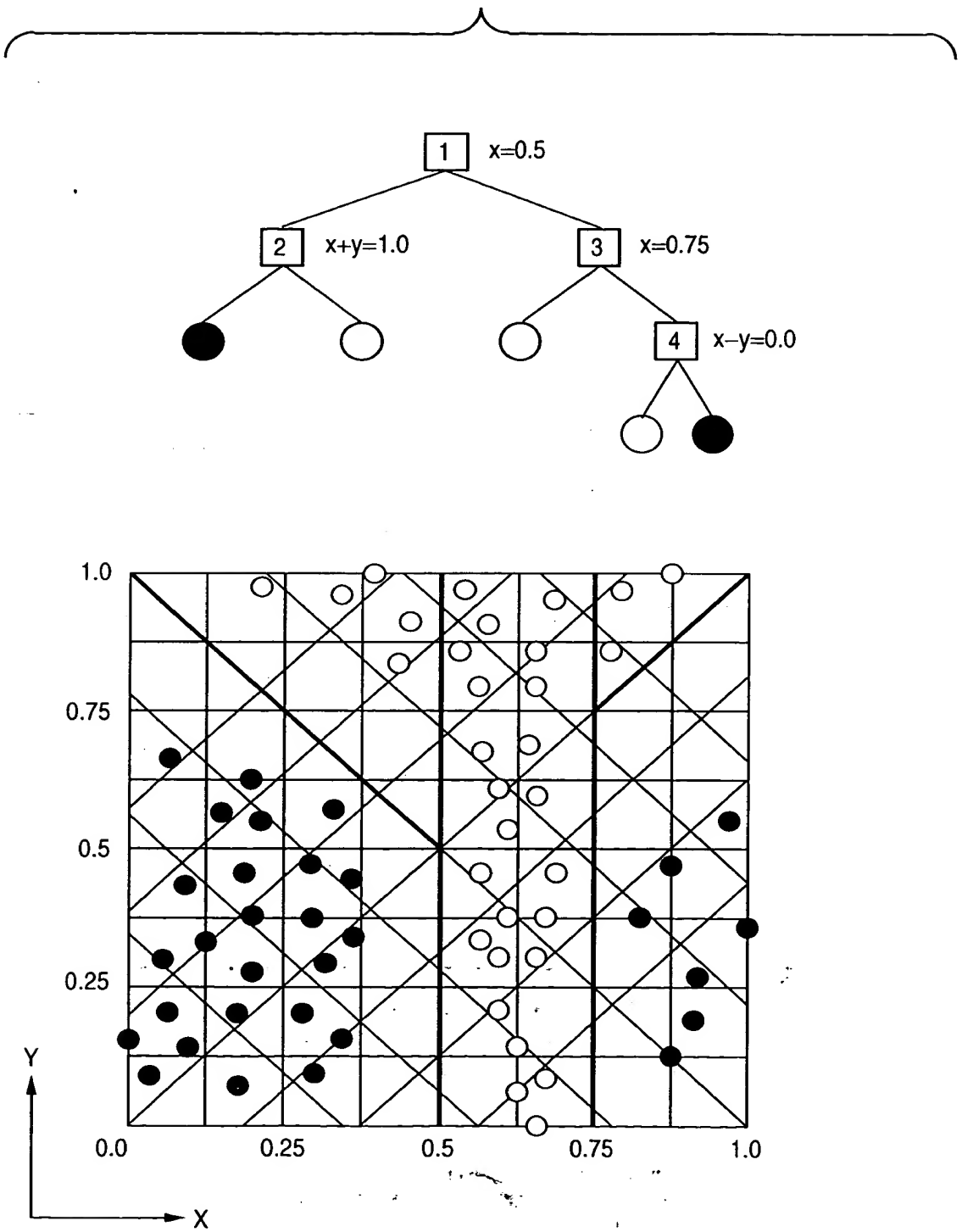


FIG. 6

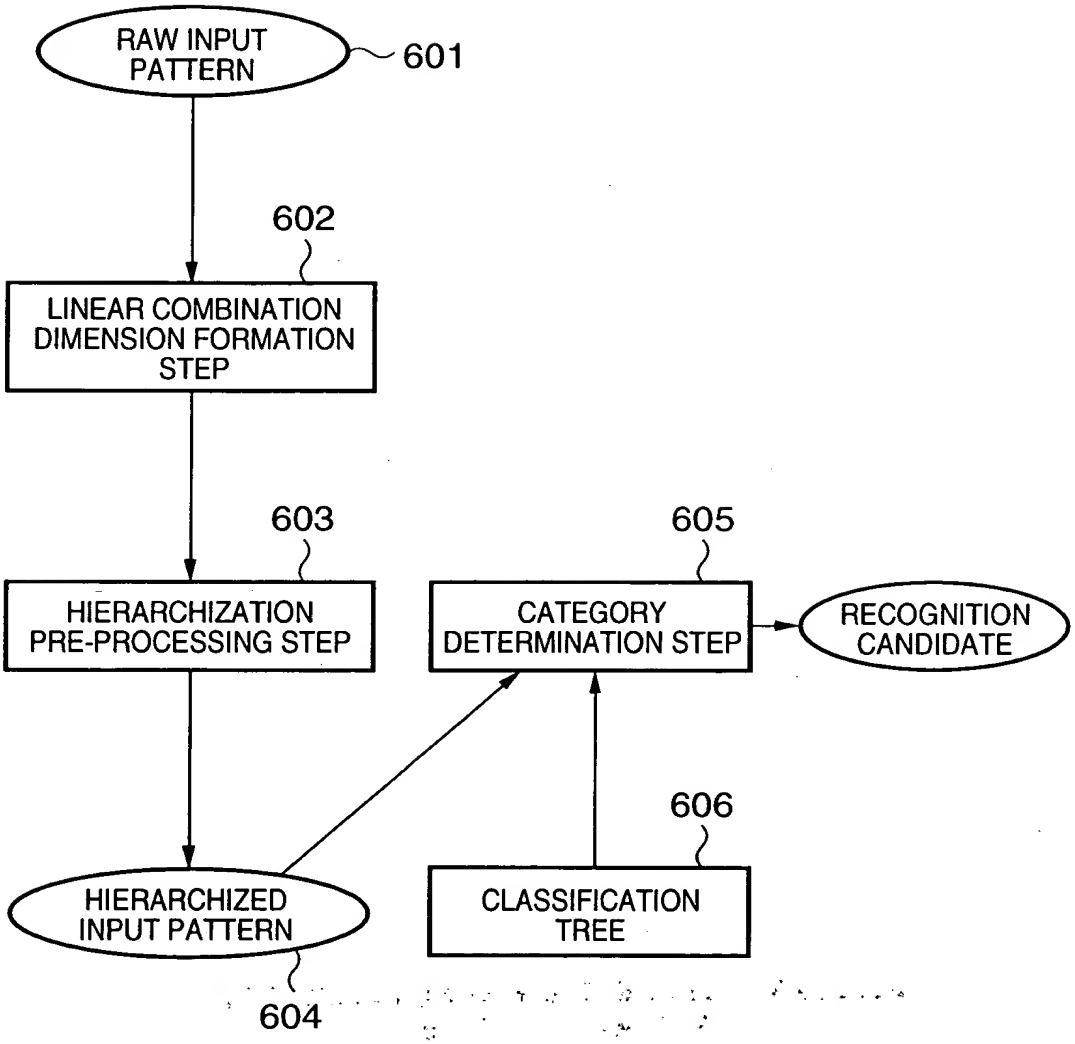

RAW INPUT PATTERN
601
602
LINEAR COMBINATION DIMENSION FORMATION STEP
603
HIERARCHIZATION PRE-PROCESSING STEP
605
CATEGORY DETERMINATION STEP
RECOGNITION CANDIDATE
606
HIERARCHIZED INPUT PATTERN
CLASSIFICATION TREE
604

FIG. 7A

DIVISION BY HYPERPLANE X = Ci

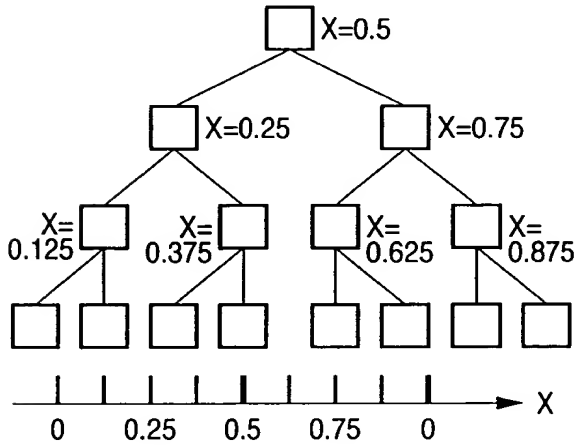


FIG. 7C

DIVISION BY HYPERPLANE X + Y = Ck

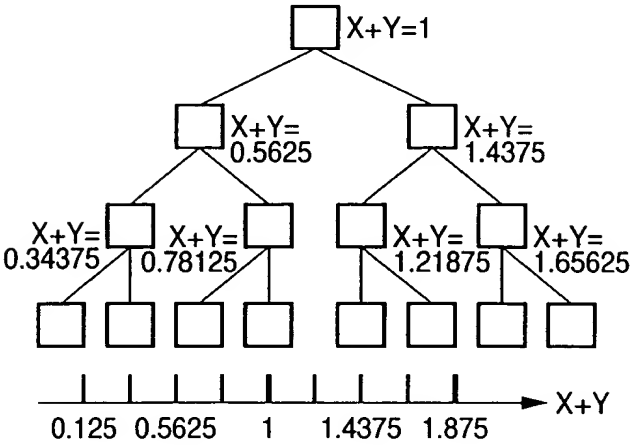


FIG. 7B

DIVISION BY HYPERPLANE Y = Cj

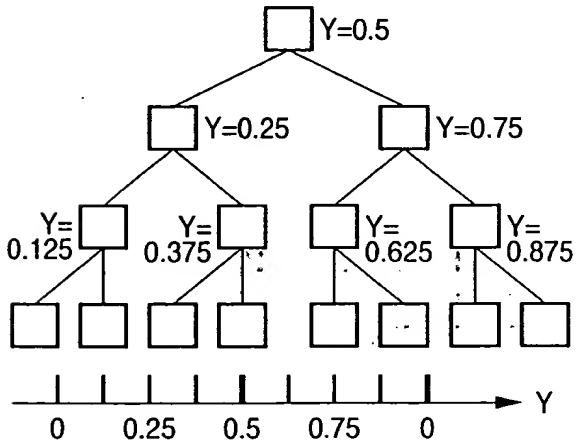


FIG. 7D

DIVISION BY HYPERPLANE X – Y = Cl

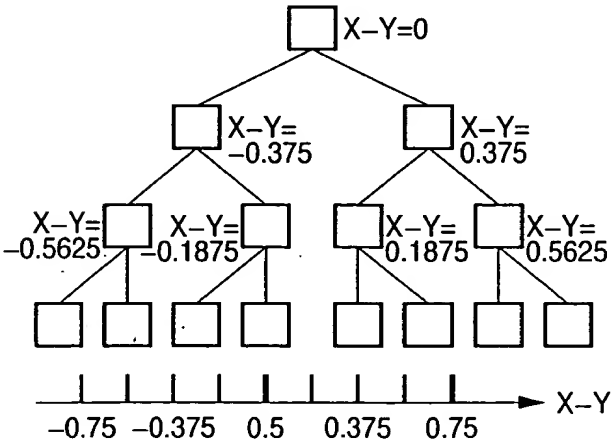


FIG. 8

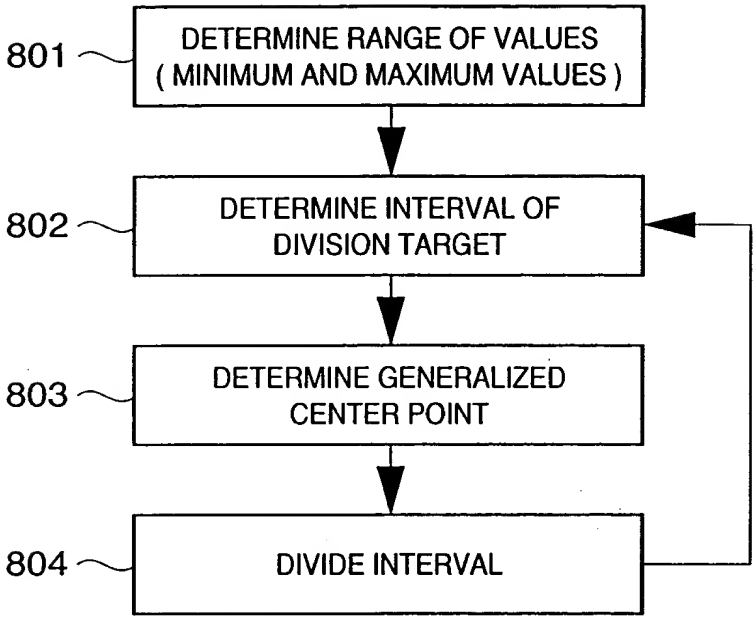
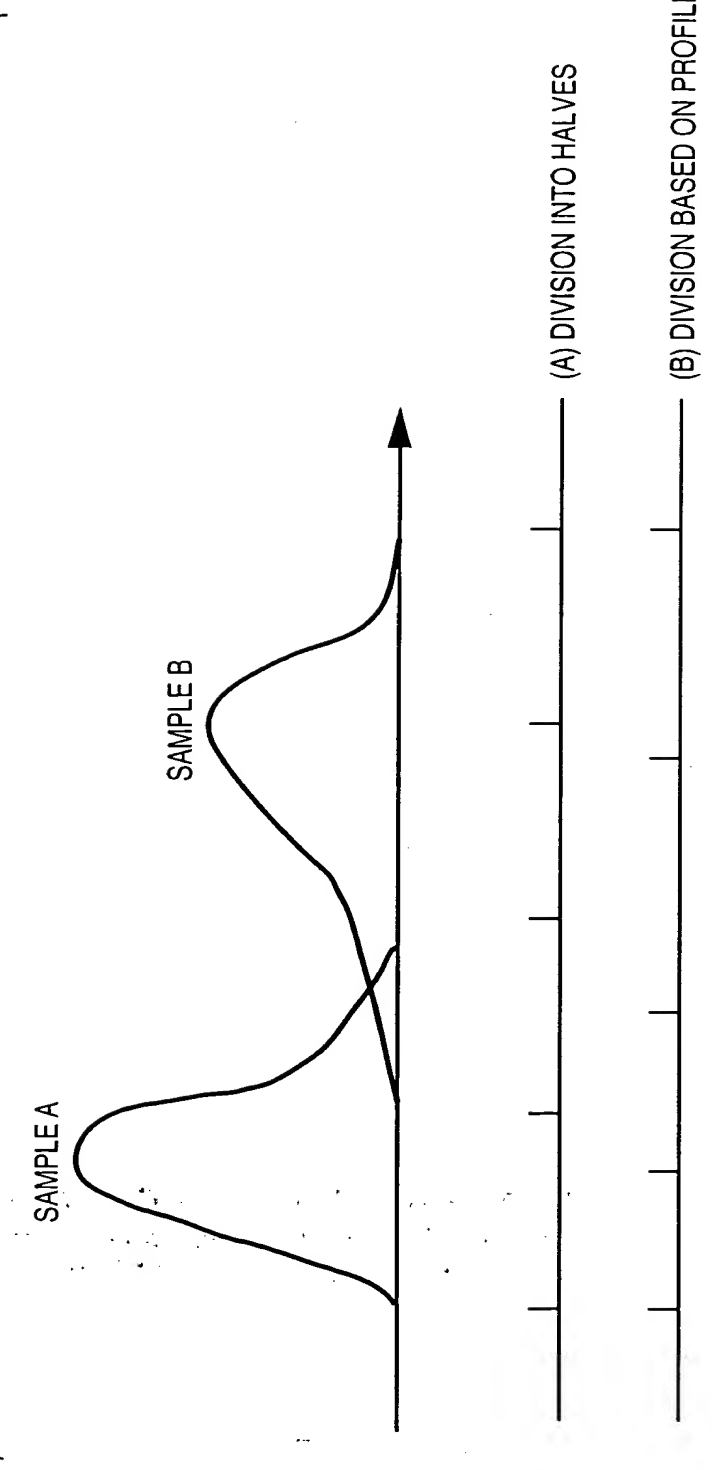

801
DETERMINE RANGE OF VALUES
(MINIMUM AND MAXIMUM VALUES)
802
DETERMINE INTERVAL OF
DIVISION TARGET
803
DETERMINE GENERALIZED
CENTER POINT
804
DIVIDE INTERVAL

FIG. 9


SAMPLE A
SAMPLE B
(A) DIVISION INTO HALVES
(B) DIVISION BASED ON PROFILE